The Outlook for Milk and Dairy Products Is Affected By

MARKETING COSTS

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What Are Milk Distribution Costs?

The farmers' share of the consumers' milk dollar fell from 52 percent in 1952 to 49 percent in 1953. The farmers' share declined further early in 1954 to 46 percent and was at that same level during the 3rd quarter of 1954. During the period from 1952 to 3rd quarter 1954, retail prices for fluid milk declined an average of .7 cents per quart. Farm prices dropped 1.7 cents per quart and the marketing margin increased by 1 cent per quart.

These over all statistics indicate that margins have widened but they do not in themselves provide a basis for judging whether distributors' marketing margins are too high. Nor do they necessarily indicate the situation accurately for individual markets.

The increase in distributing margins is associated with an increase in the prices of the items of cost that enter into these margins. For example, take labor, the largest single item of cost in milk distribution. The average hourly earnings reported by the Bureau of Labor Statistics for employees in the dairy products industries increased by 11 percent from 1952 to August 1954 while margins for fluid milk increased by 9 percent during the same period.

Barring declines in wage rates and prices of other items of cost in milk distribution it is not likely that margins can be substantially reduced unless ways can be found to increase the efficiency of processing and distributing milk. There is an abundance of evidence that milk distribution can be more efficient than it is. Studies of milk distribution costs invariably show wide differences in efficiency among distributors -- akin to the differences among dairy farmers in their

cost of producing milk. For example, data for 57 widely scattered fluid milk plants for the 3rd quarter of 1953 shows that the range in processing and distribution costs varied from 5 cents to nearly 17 cents per quart. These firms, of course, differed greatly in many respects. The prevailing wage rates were different. The proportion of sales delivered on retail routes and the proportion of milk packaged in paper containers varies. Physical characteristics of cities which affect milk distribution costs, such as population density and traffic conditions, also vary. But although these are good explanations for many cost differences, it is quite clear that there are many opportunities for distributors to improve the efficiency of their operations and reduce costs through improved management, adoption of technological advances which increase labor efficiency, or elimination of unnecessary services.

Would Milk Consumption Increase If Distribution Costs Were Lower?

Undoubtedly, if distribution costs were reduced and consumer milk prices were correspondingly lower, milk consumption would be increased if other conditions remained unchanged. However, studies on this subject indicate that milk consumption would increase by a smaller percentage than the decrease in milk prices.

And, it may well be true that some people respond more strongly to lower milk prices than others. There has been increasing interest in various types of consumer discount plans and lower priced multiple-quart containers which give families purchasing relatively large quantities of milk at one time an incentive to increase consumption. Changes in per capita incomes or successful promotional or educational

programs might increase per-capita milk consumption by as much as any probable change in prices. The indicated effect of price cuts on milk sales when considered separately assumes no change in basic demand. The results may be quite different when price changes are accompanied by promotional activities designed to raise the level of demand.

How Can Distribution Costs Be Reduced?

Taking the characteristic behavior of cost items into account, it appears that the best opportunity to increase efficiency and reduce costs lies in finding some way to increase the volume handled per unit of resource used. This means expanding sales volume, adopting new techniques, eliminating unnecessary services, or some combination of these.

Increasing Volume Per Plant

The fact that many milk plants do not operate at their potential capacity is a fact that has been reported in several studies. A large part of the costs for a fluid milk plant are relatively fixed for quite wide volume ranges and additional volume can be handled at relatively little increase in cost. Increased volume produces some savings also in delivery cost.

Technological Change

Some of the more promising technological developments in this field are the new in-place cleaning procedures, adaptations of modern materials handling methods to the milk business, new products, bulk handling of milk on farms, mechanization of office work and many others. These developments do not necessarily apply to all situations at the present time. But it is technological progress that offers the greatest hope, in

the long run, for reducing labor cost in processing and distributing milk. Furthermore, the application of existing technical knowledge could reduce costs measurably in the short run.

Outer Market Distribution

Distribution of milk by milk dealers outside local market areas has increased greatly in recent years. In fact, several instances of packaged milk moving regularly to cities and towns several hundred miles from the location of the milk plant have been reported. This method of distribution permits plant efficiencies associated with large scale plants to be realized because it increases the size of the potential market for particular firms. However, the gains from larger scale plant operations are offset at least in part by increases in delivery costs. The increase in out-of-market sales is associated with the development of paper packages and the economies associated with large scale paper operations. The desire of many cities and towns to obtain a higher quality than was formerly available and improvements in transportation and refrigeration were also important factors in this development. The expansion of distribution areas tends to increase the number of dealers competing directly, particularly in small cities and towns.

Multiple-quart Containers

Whether or not packaging in multiple-quart containers reduces operating costs or increases them depends on a number of factors such as the size plant, volume packaged in the large containers, and the present equipment in and arrangement of the plant. The rather limited data available show that the savings in cost for processing milk in large containers jointly with quart operations are little, if any, lower than

packaging in quarts only. In some plants they might be higher because usually the large container is added to the number of container sizes already being filled in the plant and present equipment may not be adaptable. This does not preclude a different situation for a large specialized plant designed to fill large packages efficiently. The difficulty of adding large containers has been overcome in many smaller plants by purchasing gallons and half-gallons from plants set up to handle them or by having the work done on a custom basis.

Large containers have been introduced in many markets and are used extensively as devices for granting quantity discounts and as a promotional tool by agressive firms seeking to enter new markets or increasing sales in existing markets.

Retail Discounts

Discount prices for purchases above a certain amount per delivery or per month by customers on retail delivery routes are granted in many markets. These are designed to encourage sales and to permit large and small volume customers to share more equitably in the cost of distribution rather than to reduce cost of delivery. Retail route discounts, however, do tend to encourage small volume customers to purchase milk at stores and thus do contribute to a small extent toward reducing average unit delivery costs.

Dispensers

Assuming an adequate volume, bulk milk dispensers for use in public eating places reduce the expense of operation and encourage milk sales. Coin-operated mechanical devices which dispense milk from bulk containers into individual cups are being developed. If they prove satisfactory

from health standpoint they may find a place in factories, office buildings, stores, and other public places. They offer possibilities for making milk available more economically at these places.

Vending Machines

The use of the vending machines for packaged milk has increased greatly during the past year. An industry estimate indicates an increase of 25 percent in vendors for 1954. These machines are of two general types, indoor and outdoor. Some indoor machines are designed to make milk more conveniently available in half-pints or 1/3 quarts in such places as office buildings, schools, factories, filling stations, and other public places. Others vend milk for family use in quart containers in apartment buildings or other indoor places near densely populated residential areas. Out-door machines vend milk in quarts or half-gallons. They are usually located at places with convenient parking facilities near heavily traveled streets or highways, such as filling stations or super market parking lots.

Vending machines improve the availability of milk with respect to location and time. Case studies indicate that machines operating in successful locations can be served at a lower cost than through other methods of distribution but they have not generally been used to provide milk at less than store prices. However, vending machines cater only to part of the milk buying public, because locations must be carefully selected if they are to be successful. Though they are not likely to displace other means of distribution, they increase the availability of milk and promise to increase total milk sales.

Status of Research Affecting Marketing Costs

Marketing research designed to increase efficiency in the marketing of milk and dairy products falls into two categories: (1) measurement of margins and costs and analysis of factors which influence margins and costs, and (2) studies of market organization and pricing efficiency which also have the effect of increasing marketing efficiency.

USDA regularly collects basic data which yield current information on margins and costs for milk and dairy products. Series derived by computing margins by comparisons of price series are supplemented by detailed studies of costs and operating efficiency in selected parts of the marketing system. The present study of the operating costs of approximately 75 fluid milk plants will be continued and it is expected that additional work will be undertaken to estimate the cost of manufacturing and distributing ice cream.

It is true that many adjustments in plant organization, equipment, working methods and the like needed to increase efficiency require more than economic studies. Recognizing this the cooperation of other scientific workers such as engineers and technologists is frequently sought in studies of marketing efficiency. Economic research is needed to measure costs and to pinpoint the areas where improvements in efficiency are needed. Since efficiency is a relative thing, information is needed by farmers, consumers, members of Congress and firms in the industry who are not in a position to develop their own information.

Several studies relating to market organization and efficient pricing methods are now being conducted. These studies may have objectives other

than improving marketing efficiency in the narrow sense, i.e. reducing costs, but should be considered here because improvements in market organization and pricing will also increase marketing efficiency in the long run. Some examples will be given as illustrations. USDA is currently engaged in a study of sanitary and economic regulations to determine whether or not such regulations have the effect of impeding the flow of milk geographically. The results of this study may be used by industry people and by local, state, and national government officials in making or deciding not to make changes.

A series of studies have been undertaken to find means of improving the methods of pricing milk for manufacturing purposes in the fluid milk markets in the Missouri-Kansas-Oklahoma area. Another line of work gives attention to methods of increasing reliability of sampling and the accuracy of testing for butterfat in dairy plants and milk markets. Other work is directed at increasing the efficiency of pricing manufacturing products at central markets.

A study of market organization and operating costs in the production and sale of mellorine is planned. The impact of mellorine on the ice cream industry and the dairy industry generally will be evaluated.

Another study being conducted deals with the description and analysis of the procurement policies followed in a group of competing dairy plants in a selected area of Wisconsin. This study will contribute to the understanding of competition for milk supplies and is expected to lead to suggestions for improvement.

USDA also participates in research relating to the efficiency of marketing milk and dairy products which is carried on in cooperation with state experiment stations.

For example, in a project in the Southern Region the effect of merchandising methods on milk sales is being evaluated. Another study dealing with the effects of prices and income on the consumption of milk in the South has been initiated. These studies aim to find ways of increasing the low per capita consumption in the South. Other studies bearing on marketing efficiency are under way in cooperation with states in other regions.